

2

Women and Education

Highlights

- Collectively, Iowa males over the age of 25 have higher educational attainments than women over age 25.
- In the 1997-98 school year, Iowa women were conferred 62.5 percent of all degrees in higher education--the highest ever.
- A 1994 Iowa study shows that 83 percent of young women have experienced at least one sexually harassing incident in school.
- Large gaps are evident in girls' 2000-2001 enrollment in upper-level computer courses. While a virtual split exists between the percentages of boys and girls in Basic Computer and General Computer Application courses statewide, female participation drops in upper levels, from 46.0 percent to 24.4 percent participation.
- Although women make up the majority of elementary school teachers--89.0 percent--they are not equitably represented at the top administrative level. In the 2000-2001 school year, women comprised 45.7 percent of all public elementary school principals. Only 11.2 percent of high school principals were women in that same year.

—Chapter 2—

Women and Education

2.1 Education Introduction

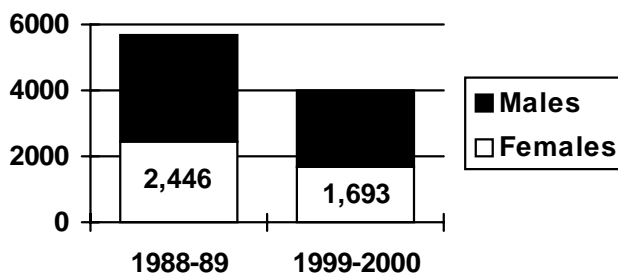
More Iowa women now than ever before are graduating from high school and receiving post-secondary education. Nevertheless, many barriers still exist toward the equal education of males and females. A lack of female administrators and female teacher role models in traditionally male-dominated fields, sexual harassment, and gender role stereotypes all impact the educational experience of Iowa females.

2.2 Educational Attainment

Educational enrollment and attainment among Iowa women is on the rise. Young women today are more likely to graduate from high school and college than their mothers and grandmothers. According to a 1990 Equal Employment Opportunity Commission (EEOC) report, 12 percent of working women ages 40-69 did not have a high school degree compared with 6 percent of those ages 25-39. The report also shows that 8 percent of females 75 and older had four or more years of college, while 17 percent of those 25-34 had four or more years of post-secondary education.¹

The proportion of women and men who obtain high school degrees increased over the past eleven years as the number of women and men who drop out of school decreased. (SEE FIGURE 2.1) Males account for the majority of dropouts for grades 7-12, making up 58.0 percent of the total number of dropouts in the 1999-2000 school year. Females that same year constituted 42.0 percent of the total number of dropouts, down from 44.9 percent one year ago.

Figure 2.1
DROPOUTS BY GENDER, IOWA,
1988-89 AND 1999-2000*

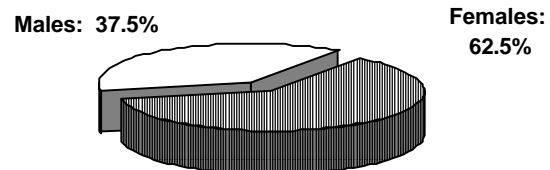


*Grades 7-12 SOURCE: Iowa Department of Education
SEE TABLE 2.1 IN APPENDIX

The 1990 U.S. Census shows that women over the age of 25 are at a slightly higher percentage rate than men having at least a high school education (or equivalent), with 80.7 percent for women and 79.5 percent for men. Males over age 25, on the other hand, had a higher percentage rate than women in obtaining post-secondary degrees. Significant movement has been made, however, in closing that gap. In the 1997-98 academic year, more females than males obtained degrees in higher education. (SEE FIGURES 2.2 AND 2.3)

Figure 2.2
HIGHER EDUCATION DEGREES
CONFERRED BY GENDER, IOWA,
1998-99*

*Total of all degrees conferred



SOURCE: Iowa College Student Aid Commission, Integrated Postsecondary Education Data Systems Completions

Figure 2.3
HIGHER EDUCATION DEGREES
CONFERRED BY LEVEL, IOWA, 1997-98

DEGREES	FEMALES	MALES
Less than 2-year Certificates	11.1%	8.6%
Associate	25.2%	24.4%
More than 2-year Certificates	0.7%	0.4%
Bachelor's	47.0%	50.3%
Master's	10.9%	8.3%
Post Baccalaureate	0.2%	0.2%
Doctor's	2.0%	1.5%
First Professional	3.0%	6.2%

SOURCE: Iowa College Student Aid Commission and Integrated Postsecondary Education Data Systems Completions
SEE TABLE 2.2 IN APPENDIX

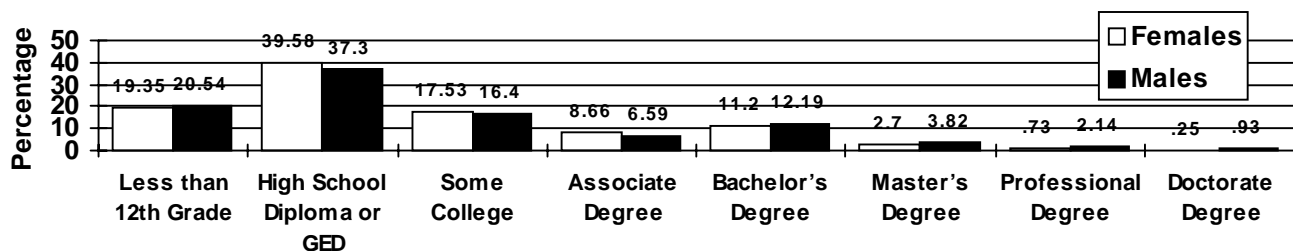
As the gender gap closes for recent college graduates in the number and type of post-secondary education received, the gap is evident in those 25 years and older. Males over the age of 25 are more likely to have their bachelor's, master's, professional, and doctorate degrees, while females tend to hold two-year degrees, a factor that can contribute to lower paying jobs. (SEE FIGURE 2.4)

While the overall levels of educational attainment are increasing for women, dramatic differences still exist among females of different ages, races, and ethnicities. For example, older women are living the effects of an educational gap that widens between females and males with age. Furthermore, white women over the age of 25 are much more likely than African-American, Asian-American, and American-Indian women to have a high

school degree. In 1990, 81 percent of all white women over the age of 25 had a high school degree or more, while only 68.9 percent of African-American women, 69.7 percent of Asian-American women, and 67.5 percent of American-Indian women had high school degrees. Similarly, women of Hispanic origin over the age of 25 were 14.2 percent less likely to have at least a high school degree than white women not of Hispanic origin.

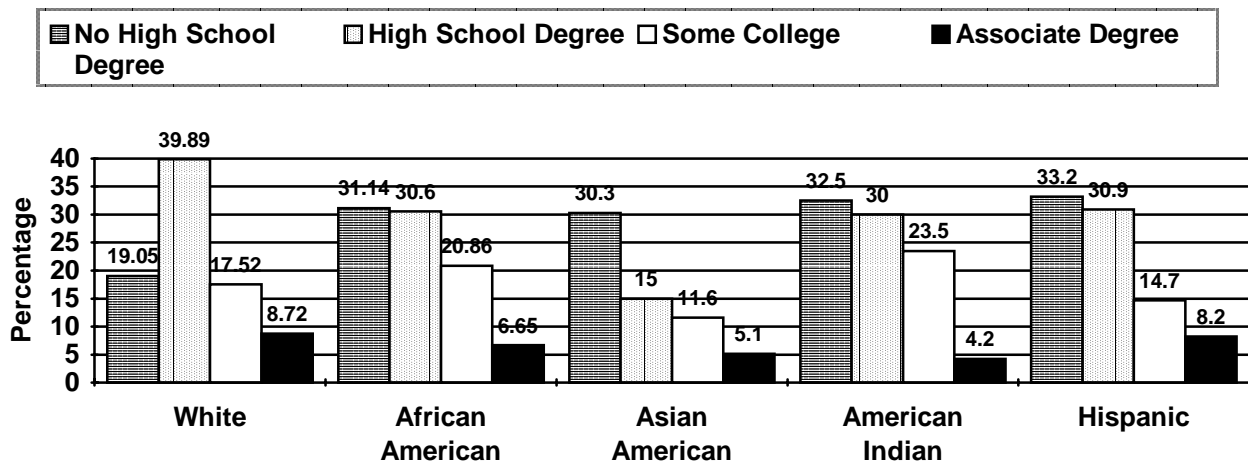
Nevertheless, the 1990 census data reveal that women of color who did graduate from high school were more likely than white women to earn post-secondary degrees. The only exception is African-American women who were twice as unlikely as white women to receive post-secondary degrees. African-American women were, however, more likely than white women to receive a post-college degree. (SEE FIGURES 2.5 AND 2.6)

Figure 2.4
EDUCATIONAL ATTAINMENT BY GENDER, THOSE 25+, IOWA, 1990



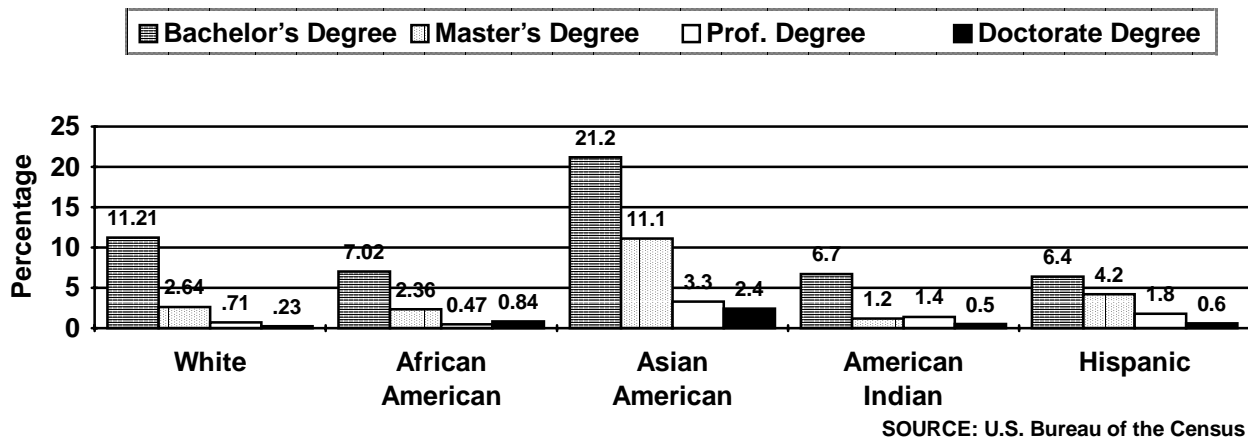
SOURCE: U.S. Census Bureau

Figures 2.5
EDUCATIONAL ATTAINMENT OF FEMALES BY RACE/ETHNICITY, 1990



SOURCE: U.S. Census Bureau

Figure 2.6
EDUCATIONAL ATTAINMENT OF FEMALES BY RACE/ETHNICITY, 1990



2.3 Sexual Harassment in Education

Students' success in school is dependent upon a number of factors, including whether or not they find themselves in a hostile educational environment. Nationwide and in Iowa's high schools, students are often victims of sexual harassment.

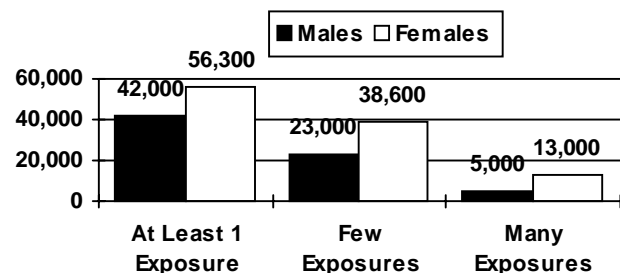
Sexual harassment is unwelcome sexual comments, requests for sex, and other verbal or physical conduct of a sexual nature when a person's success in classes or grades is at stake; when it interferes with students' classwork, social life, or athletics; or when it creates a hostile environment.²

Although both male and female students are victims of sexual harassment, Iowa's female high school students are more likely than males to have at least one exposure to a sexually harassing incident in their schools. A 1994 study of Iowa high school students by Selzer Boddy, Inc. revealed that 83 percent of young women and 62 percent of young men in Iowa have had at least one exposure to a sexually harassing incident in their schools. Collectively, this means that 98,300 Iowa high school students have

had at least one exposure to a sexually harassing situation. Many of those experience on-going harassment.³ (SEE FIGURE 2.7)

The Selzer Boddy, Inc. study showed that the size of the high school is immaterial: sexual harassment is as common at small rural schools as it is at large urban schools.⁴

Figure 2.7
SEXUAL HARASSMENT EXPOSURES, HIGH SCHOOL STUDENTS, IOWA, 1994



SOURCE: Selzer Boddy, Inc.

2.4 Educational Enrollment

Though Iowa schools are required to have a plan to promote gender equity in their vocational courses, Iowa's record of female participation in nontraditional vocational courses is poor.

The number of females enrolled in nontraditional vocational courses, e.g., construction, drafting/drawing, and electronics, is low. Similar findings can be found for males in traditionally female-dominated vocational courses such as child development and home economics. The statistics do, however, indicate that Iowa is doing a better job of attracting males to traditionally female-dominated courses than it does in attracting females to traditionally male-dominated vocational courses. (SEE FIGURE 2.8)

Enrollment of females in Iowa's upper level high school math and science courses continues to be high. (SEE FIGURE 2.8)

Large gaps, however, are evident in girls' 2000-01 enrollment in upper-level computer courses. While an almost equal percentage of boys and girls in Basic Computer and General Computer Application courses statewide, female participation drops dramatically in classes such as programming. (SEE FIGURE 2.9)

Figure 2.8
SELECT PUBLIC HIGH SCHOOL COURSE ENROLLMENT OF FEMALES, IOWA
1990-1991 AND 2000-2001

<u>VOCATIONAL</u>			<u>MATH/SCIENCE</u>		
<u>COURSE</u>	<u>1990-91</u>	<u>2000-01</u>	<u>COURSE</u>	<u>1990-91</u>	<u>2000-01</u>
General Home Economics	72.1%	65.9%	Algebra	49.9%	49.6%
Child Development	81.7%	86.5%	Advanced Algebra	51.7%	50.3%
Automotive	6.0%	5.9%	Calculus	46.8%	45.8%
Construction	7.3 %	3.2%	Trigonometry	51.8%	52.3%
Drafting	10.7%	12.0%	Computer Science	48.9%	43.8%
Electronics	3.6%	3.3%	Chemistry	50.4%	54.2%
Metals	2.0%	3.1%	Physics	41.3%	52.3%

SOURCE: Iowa Department of Education

Figure 2.9
PUBLIC HIGH SCHOOL COURSE
ENROLLMENT IN COMPUTER & INFORMATION
SCIENCES, BY GENDER, IOWA, 2000-2001

<u>COURSE</u>	<u>MALES</u>	<u>FEMALES</u>
Basic Computer	54.0%	46.0%
General Computer App.	52.7%	47.3%
Business Computer App.	51.6%	48.4%
Business Programming	58.6%	41.4%
Data Processing	42.0%	58.0%
Computer Graphics	64.1%	35.9%
Computing System	62.1%	37.9%
Computer Technology	66.2%	33.8%
Network Technology	77.5%	22.5%
Computer Programming	75.6%	24.4%
Basic Programming	77.1%	22.9%
Pascal Programming	83.8%	16.2%
Other Programming	77.0%	23.0%
AP Computer Science	78.9%	21.1%
Computer-related Subject	64.4%	35.6%
Computer-Independent	51.8%	48.2%
Computer-Other	48.9%	51.1%

SOURCE: Iowa Department of Education

SEE TABLE 2.3 IN APPENDIX

2.5 Higher Education by Program Area

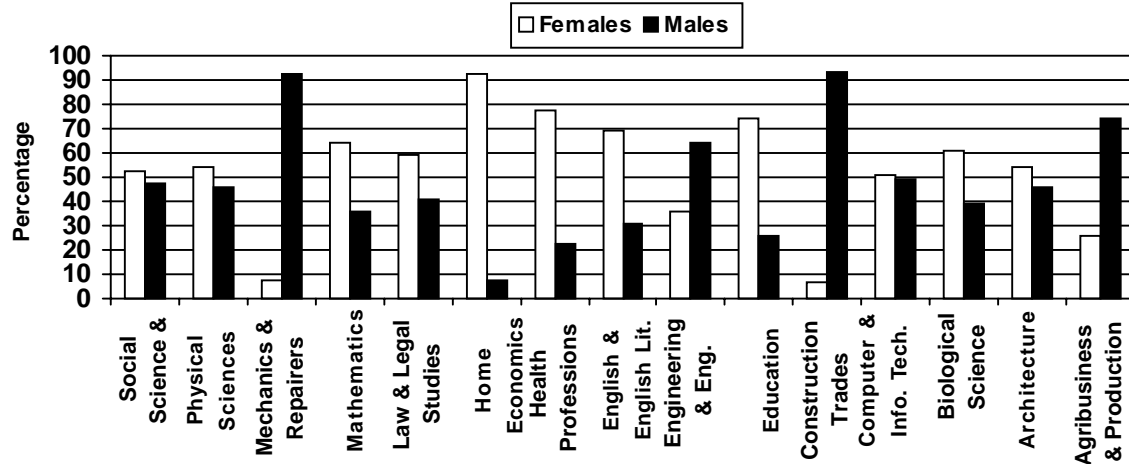
Distinct differences exist in the post-secondary education of women and men. Post-secondary educational opportunities include vocational education programs and two- and four-year college, professional, and graduate programs.

Although progress has been made, women and men are still clustered in traditionally male/female areas of study. Degree areas where women are still severely underrepresented include mechanics and repairers, construction trades, and agribusiness and production.

Low enrollment of women in nontraditional vocational education courses is one of the causes of wage disparity. The result is that women are concentrated in a relatively small number of occupations that are traditionally dominated by females and characterized by low pay, poor fringe benefits, and limited opportunities for advancement. As these numbers increase, the outcome should be greater parity in wages.

Changes, however, are evident from the 1997-98 school year. Women, for example, outnumbered men 177 to 99 with mathematics degrees, 681 to 436 with biological sciences/life sciences degrees, and 269 to 183 in law and legal studies degrees. Women also nearly equaled men in computer and information technologies (264 to 256) and physical science (207 to 175) degrees. (SEE FIGURE 2.10)

Figure 2.10
DEGREES CONFERRED IN SELECT DISCIPLINES IN HIGHER
EDUCATION, BY GENDER, IOWA, 1997-98



SEE TABLE 2.3 IN APPENDIX SOURCE: Integrated Postsecondary Education Data System Completions

2.6 Educational Personnel

Clear differences exist in the employment of women and men in secondary educational institutions, reflecting the traditional occupational specializations of women and men.

Women overwhelmingly comprise Iowa's elementary education teachers and are also the majority of English, consumer and homemaking education, and vocational home economics teachers. Men, on the other hand, dominate social studies and industrial education classrooms. (SEE FIGURE 2.11)

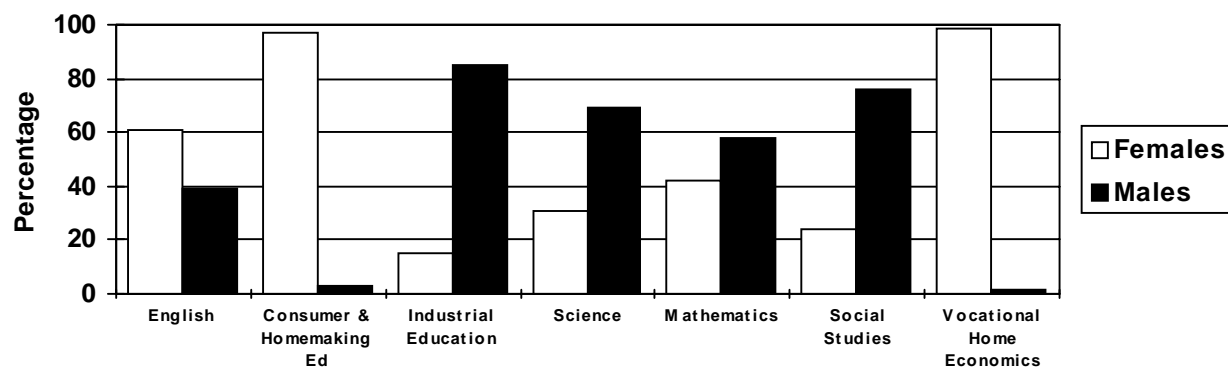
The number of women teaching in certain male-dominated fields, however, has increased. More women are now teaching sciences and math than in past years. (SEE FIGURE 2.11)

Although women make up the majority of elementary school teachers--89.0 percent--they are not equitably represented at the top administrative level. In the 2000-01 school year, women comprised 45.7 percent of all public elementary school principals. (SEE FIGURE 2.12)

Women make up even less of the total body of public high school principals—11.2 percent. Similarly, an extremely high majority of men serve as superintendents in the state—94.2 percent. (SEE FIGURE 2.12)

As of July 2001, 5 out of 30 members of the Iowa Association of Independent Colleges had females as presidents. Of the three regents universities, there was one female president. There were two female presidents at the 15 community colleges.

Figure 2.11
PUBLIC SCHOOL TEACHERS, BY GENDER, IOWA,
2000-01*



*Full-time and part-time

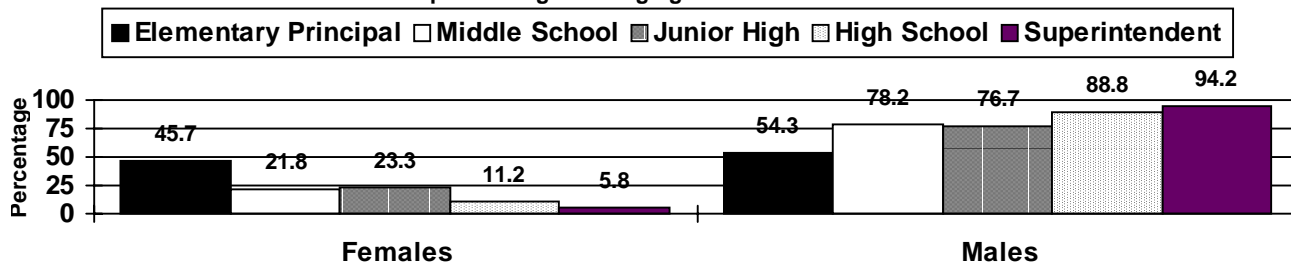
SEE TABLE 2.5 IN APPENDIX

Source: Iowa Department of Education

Figure 2.12

PUBLIC SCHOOL ADMINISTRATORS, BY GENDER, IOWA, 2000-01

*Most communities have changed to or are in the processing of changing to middle schools



SEE TABLE 2.6 IN APPENDIX

SOURCE: Iowa Department of Education

2.7 Salaries in Higher Education

For the most part, female post-secondary educators in Iowa received salaries that were less than their male colleagues in the 1999-2000 school year. The differences in salaries among male and female two- and four-year private/public colleges, however, has been significantly decreasing over the past few years.

Iowa's post-secondary female educators earned less than men at all levels—professor, associate professor, and instructor—at all two- and four-year private/public

colleges with six exceptions.

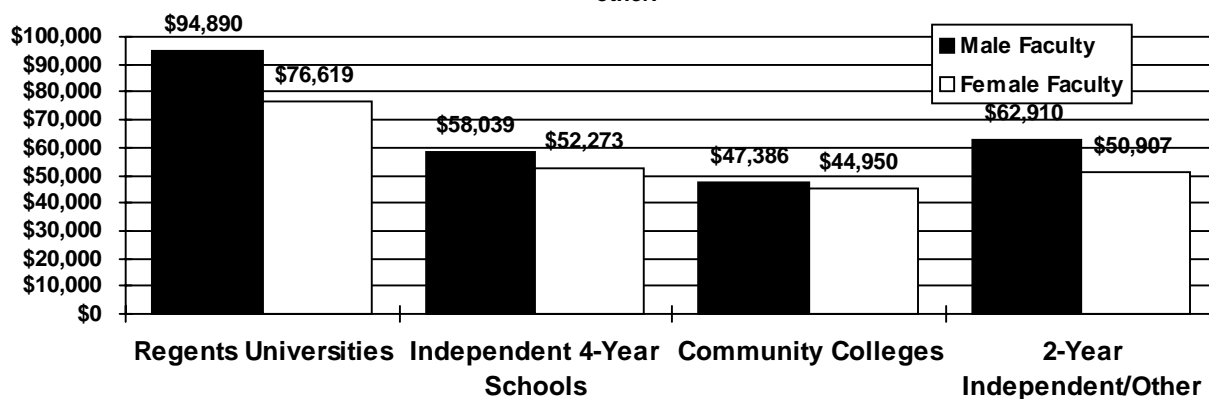
Female instructors at the regents universities earn more than their male colleagues. At four-year private colleges, female associate professors and instructors earn more than males. At community colleges, female associate professors, assistant professors, and instructors' earnings are higher than men. (SEE FIGURE 2.13)

Figure 2.13

MEAN SALARIES OF FACULTY MEMBERS, BY GENDER, IN HIGHER EDUCATION INSTITUTIONS. IOWA 1999-2000* **

*Salaries figures are for faculty on 12-month contracts.

**Includes professors, associate professors, assistant professors, instructors, lecturers, and other.



SEE TABLE 2.7 IN APPENDIX

SOURCE: Integrated Postsecondary Education Data Systems Completions

2.8 Forward-looking Strategies

- Affirmative action programs that promote opportunities for women in educational administration must be continued and strengthened. Having more women in administrative positions results in role models for students as well as a vehicle for change in the institutional environment.
- Although measurable success has been made in the increased participation of females in math and science on national and state levels, Iowa needs to continue its programming designed to encourage female students to study math and science, especially beyond high school.⁵ That could mean the difference between a low-wage job and one with economic advantages.
- A need exists for specialized programming to encourage females to enroll in high-skill computer courses. Nationwide and in Iowa girls tend to cluster in lower-end data entry and word-processing classes that can lead to less stimulating, lower-paying jobs, particularly as our society becomes increasingly dependent upon those computer skills for work.⁶
- More females should be encouraged to participate in vocational classes in junior high and high schools and to acquire post-secondary vocational education. By taking commonly male-dominated nontraditional vocational courses in high school, females may discover interests that transform into career options later on. Similarly, males must be encouraged to take traditionally female-dominated courses, such as home economics, child care, and health care, at secondary and post-secondary educational institutions.
- Equity and diversity training should be infused into college programs such as counseling, administration, teaching, media, and coaching.
- There needs to be active recruitment of male teachers in elementary classrooms and female teachers in courses that are nontraditional for women.
- Sexual harassment is an ongoing problem in Iowa's schools and colleges. Training and retraining of educators, students, and governing boards in a curriculum on harassment must take place in all school districts and at all post-secondary schools. All schools should adopt a comprehensive harassment policy; implement the policy; educate staff, students, parents, and the community in regards to harassment; and make each school a zero tolerance zone for harassment.
- The state should continue its effort in training women for nontraditional jobs. The increase in the gender educational gap with age translates into lower wages and even poverty for older women. Training programs allow those and other women opportunities to acquire skills in a field that pays above minimum wage.
- State funding should be made available for programs and educational equity, including monitoring and implementing the multi-cultural, gender-fair curriculum mandated by the *Code of Iowa*.

¹Equal Employment Opportunity Commission File, 1990.

²Iowa Commission on the Status of Women, *Iowa Women & the Law* (October 1997): 9-10.

³Selzer Boddy, Inc., *Sexual Harassment: An Abuse of Trust: A Report On A Statewide Survey of Sexual Harassment in Iowa High Schools*, 1994.

⁴Ibid.

⁵American Association of University Women Educational Foundation, *Gender Gaps: Where Our Schools Still Fail Our Children* (Washington, D.C., September 1998): 10.

⁶Ibid, p. 14.

Chapter 2: Women in Education

Table 2.1

1999-2000 DROPOUTS AND ENROLLMENT BY GENDER AND RACE/ETHNICITY, GRADES 7-12

	<u>Dropouts</u>	<u>Enrollment</u>
Total	4,027	229,779
Total Male	2,334	117,474
Total Female	1,693	112,305
Total White	3,364	212,235
White Male	1,959	108,584
White Female	1,405	103,651
Total Black	254	6,895
Black Male	128	3,417
Black Female	126	3,478
Total Asian	63	3,967
Asian Male	41	2,055
Asian Female	22	1,912
Total Hispanic	295	5,668
Hispanic Male	172	2,946
Hispanic Female	123	2,722
Total American Indian	51	1,014
American Indian Male	34	472
American Indian Female	17	542

Table 2.2

HIGHER EDUCATION DEGREES CONFERRED BY LEVEL, IOWA, 1997-98

<u>Regents</u>	<u>4-year Independent</u>	<u>Community Colleges</u>	<u>2-year Independent</u>
<u>Undergraduate/Graduate</u>	<u>Undergraduate/Graduate</u>	<u>Associate/Diploma or Certificate</u>	<u>Associate/ Other</u>
<u>Females</u>			
5,432 / 2,525	5,390 / 833	5,094 / 2,339	1,085
<u>Males</u>			
4,089 / 1,221	2,749 / 490	3,140 / 1,192	726

Table 2.3

PUBLIC HIGH SCHOOL COURSE ENROLLMENT IN COMPUTER & INFORMATION SCIENCES, BY GENDER, IOWA, 2000-01

<u>Course</u>	<u>Females</u>	<u>Males</u>
Basic Computer	1,193	1,398
General Computer	5,937	6,614
Business Computer App.	3,494	3,836
Business Programming	162	229
Data Processing	302	219
Computer Graphic	875	1,563
Computing System	163	267
Computer Technology	209	409
Network Technology	101	348
Computer Programming	275	853
Basic Programming	240	807
Pascal Programming	37	192
Other Programming	158	529
AP Computer Science	37	138
Computer-related Subject	88	159
Computer-Independent	67	72
Computer-Other	747	715

Table 2.4

DEGREES CONFERRED IN SELECT DISCIPLINES IN HIGHER EDUCATION, BY GENDER, IOWA, 1995-96

<u>Discipline</u>	<u>Females</u>	<u>Males</u>
Agribusiness & Production	184	520
Architecture	100	84
Biological Sciences	681	436
Computer & Info. Sciences	264	256
Construction Trades	19	259
Education	2,393	821
Engineering & Related Tech.	611	1,076
English & Literature	596	266
Health Professions	4,457	1,264
Home Economics	276	22
Law and Legal Studies	269	183
Mathematics	177	99
Mechanics and Repairs	55	639
Physical Sciences	207	175
Soc. Sciences & History	867	784

Table 2.5

PUBLIC SCHOOL TEACHERS BY GENDER, IOWA, 2000-01

<u>Course</u>	<u>Female</u>	<u>Male</u>
English	2,452	1,560
Consumer & Homemaking Education	304	10
Industrial Education	57	331
Science	856	388
Mathematics	588	799
Social Studies	374	1,179
Vocational Home Economics	122	2

Table 2.6

PUBLIC SCHOOL ADMINISTRATORS BY GENDER, IOWA, 2000-01

<u>Level</u>	<u>Female</u>	<u>Male</u>
Elementary Principal	249	296
Middle School Principal	39	140
Junior High Principal	7	23
High School Principal	36	286
Superintendent	19	307

Table 2.7

MEAN SALARIES OF FACULTY MEMBERS, BY GENDER, OF HIGHER EDUCATION INSTITUTIONS, IOWA, 1999-2000

	<u>Professor</u>	<u>Associate Professor</u>	<u>Assistant Professor</u>	<u>Instructor</u>	<u>Lecturer/Other</u>
<u>Regents</u>					
<u>Universities</u>					
Females	\$101,273	\$75,199	\$64,082	\$47,674	-
Males	\$107,783	\$79,616	\$71,363	\$44,628	-
<u>4-year Independent</u>					
Females	\$ 58,940	\$60,271	\$47,570	\$44,295	\$36,633
Males	\$ 77,387	\$53,315	\$49,346	\$38,260	-
<u>Community</u>					
<u>Colleges</u>					
Females	\$ 50,327	\$43,468	\$39,823	\$43,532	\$47,165
Males	\$ 56,732	\$42,399	\$37,997	\$42,272	\$47,534
<u>2-year Independent/ Other</u>					
Females	\$ 74,214	\$66,804	\$54,450	\$43,629	\$42,830
Males	\$ 79,716	\$71,950	\$55,062	\$45,113	\$31,160